



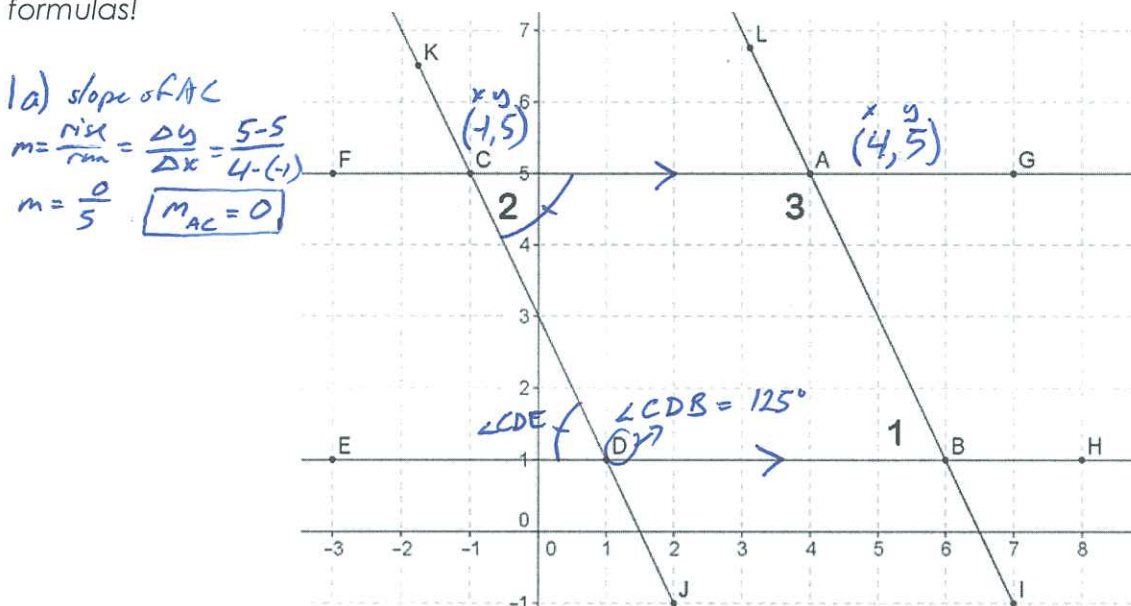
Name: _____
 Mr. Tiénou-Gustafson, Mr. Biellemeier
 Geometry, Period _____
 Due Date: Mon, 16 March 2015

HW119 Quadrilaterals *Form A*

**Geometry
Homework**

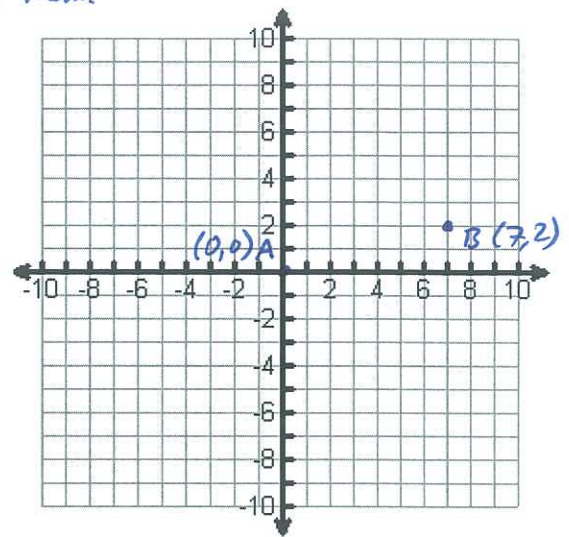
Quadrilaterals, part 1: Parallelograms!

Directions: Carefully read and answer the following questions. Be sure to use the appropriate formulas!

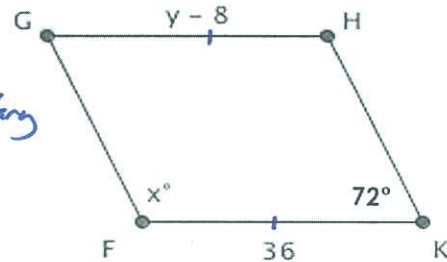


- Use the figure above to answer the following questions.
 - Find the slopes of lines AC and BD. What do you notice about these lines?
 - Find the slopes of lines AB and CD. What do you notice about these lines?
 - Find the length of line segments AC and BD. *distance formula* What do you notice about these lengths? *these you could also count, but in (d) you cannot.*
 - Find the length of line segments AB and CD. What do you notice about these lengths?
- Use the figure above to answer the following questions.
 - Given that $m\angle CDB = 125^\circ$, find the measures of the 3 numbered angles. Label these angles on the diagram. *Hint 1: $\angle CDB$ & $\angle CDE$ make a straight line, or 180°*
 - Angles CAB and CDB are **opposite angles**. What is the relationship between opposite angles? Name the other pair of opposite angles. *hint 2: opposite interior angles of 11 lines are congruent*
 - Angles CAB and ABD are **consecutive angles** because they are next to each other inside the shape. What is the relationship between consecutive angles? Name the other 3 pairs of consecutive angles.
- Quadrilateral ABDC is called a parallelogram. Copy the sentence in your notebook and correctly fill in the blank using the information you discovered in #1 & 2.
 - In a parallelogram, there are 2 pairs of _____ sides. (Hint: look at #1 a & b)
 - In a parallelogram, opposite sides are _____. (Hint: look at #1 c & d)
 - In a parallelogram, opposite angles are _____.
 - In a parallelogram, consecutive angles are _____.

4. A figure has vertices at $(0, 0)$, $(7, 2)$, $(8, 5)$, and $(1, 3)$. Is this quadrilateral a parallelogram? Explain how you know in at least 2 sentences. Be sure to include what we know about the sides of a parallelogram in your explanation.

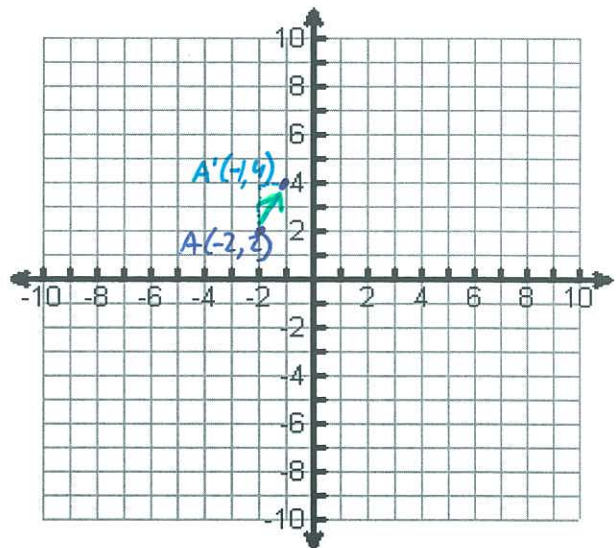


5. Given $GH \parallel FK$ and $GF \parallel HK$.
 a. Find the values of x and y .
 b. Find the $m\angle G$ and the $m\angle K$. - these are supplementary

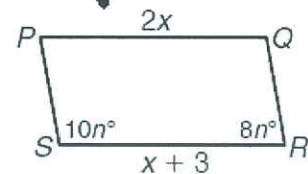


6. A parallelogram has vertices at $A(-2, 2)$, $B(3, -1)$, $C(3, 4)$, and $D(-2, -3)$. If point A was moved to $A'(-1, 4)$, what other point would have to move to keep the figure a quadrilateral? Give its new coordinate.

up 2,
right 1



7. $PQRS$ is a parallelogram. Find the following:
 a. RS
 b. $m\angle S$
 c. $m\angle R$



8. $JKLM$ is a parallelogram. Find each measure/length.
 a. $m\angle L$
 b. $m\angle K$
 c. MJ

